MYSTERY: YOUR SKIN · 5 MINUTES + 30 MINUTES

Damp Mittens

Why do your hands feel damp inside mittens, even on a cold, dry day? Seal one hand in a plastic bag for half an hour and watch what appears.

What you'll need

- ✓ A gallon plastic bag
- ✓ A 12-inch piece of string
- ✓ A clock or timer
- ✓ A pencil

Bag it

1. Feel your hand. Is it damp or dry? Write it down as your 0-minute check.
2. Slide your hand into the bag and tie the string around your wrist so no air can get in or out. Note the time.

Watch it

3. Check your hand every 10 minutes for half an hour. Write down how much moisture you see.
4. Bonus: go outside and run around with your hand still in the bag. Does the moisture build up faster?

Tip: Tie the string snug, not tight. It should keep air out, not squeeze your wrist.

Why it works

Your skin is always releasing a little sweat through tiny openings called **pores**. Usually it **evaporates**, turning into an invisible gas, and helps keep you cool.

Inside the bag, the moisture can't escape, so it **condenses** back into drops on the plastic. Mittens trap moisture the same way, only more slowly.

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Record your results

Time	What do I see and feel?
0 minutes	
10 minutes	
20 minutes	
30 minutes	
After running around	

WINTER CONNECTION

Wet hands get cold much faster than dry ones, because water carries heat away from your skin. That's why wool and other fabrics that let moisture escape help keep winter hands warm.

Think about it

1. How much moisture was in the bag after 30 minutes?

2. What's the difference between evaporation and condensation?

Watch the video and try 4 more winter mysteries

Scan the code, or visit superchargedscience.com/opt/winter-science-mysteries-your-experiments. From the Supercharged E-Science Program.

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